

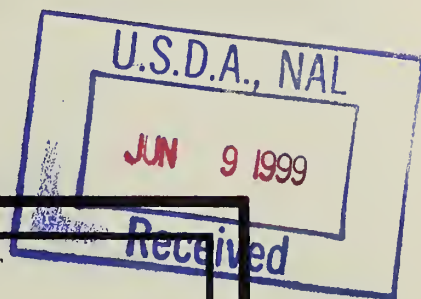
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UNITED STATES DEPARTMENT OF AGRICULTURE  
CONSUMER AND MARKETING SERVICE  
WASHINGTON, D.C.



**UNITED STATES  
STANDARDS**  
*for grades of*  
**CANNED BEETS**

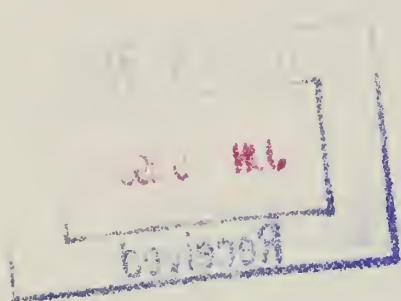


**EFFECTIVE FEBRUARY 4, 1955**

**Sixth Issue**

*As Amended*

These standards supersede the standards  
which have been in effect since  
July 9, 1948



This is the sixth issue, as amended, of the United States Standards for Grades of Canned Beets.

The sixth issue (effective November 2, 1951) was amended (effective February 4, 1955) to provide for drained weights by sizes of beets. In the interim these standards were recodified in the Federal Register on December 9, 1953 (18 F.R. 7937). Subsequent to that time, Section 52.534 was amended by an over-all amendment, May 22, 1957 (22 F.R. 3547).

This issue, as amended, is included in the Code of Federal Regulations, Title 7--Agriculture, Part 52.

This grade standard is issued under authority of the Agricultural Marketing Act of 1946 which provides for the issuance of official U.S. grades to designate different levels of quality for the voluntary use of producers, buyers, and consumers. Official grading service is also provided under this Act upon request of the applicant and upon payment of a fee to cover the cost of the service.

As is the case of other standards for processed fruits and vegetables, these standards are designed to serve as a convenient basis for sales, for establishing quality control programs, and for determining loan values. They will also serve as a basis for the inspection of this commodity by Federal inspection service, which is available for the inspection of other processed products as well.

These standards are issued by the Department after careful consideration of all data and views submitted and the Department welcomes suggestions which might aid in improving these standards in future revisions. Comments may be submitted to, and copies of these standards obtained from:

Chief, Processed Products Standardization and Inspection Branch  
Fruit and Vegetable Division, C&MS  
U.S. Department of Agriculture  
Washington, D. C. 20250

# UNITED STATES STANDARDS FOR GRADES OF CANNED BEETS 1/

Effective

November 2, 1951, as amended February 4, 1955

Sixth issue: These standards supersede the standards that have been in effect since July 9, 1948

## IDENTITY, STYLES, AND GRADES

- 52.521 Identity.
- 52.522 Styles of canned beets.
- 52.523 Grades of canned beets.

## FILL OF CONTAINER AND DRAINED WEIGHTS

- 52.524 Recommended fill of container.
- 52.525 Recommended minimum drained weight.

## SIZES

- 52.526 Sizes of beets in whole beets.
- 52.527 Sizes of beet slices in sliced beets.

## FACTORS OF QUALITY

- 52.528 Ascertaining the grade.
- 52.529 Ascertaining the rating for the factors which are scored.
- 52.530 Color.
- 52.531 Uniformity of size and shape.
- 52.532 Absence of defects.
- 52.533 Texture.

## LOT CERTIFICATION TOLERANCES

- 52.534 Tolerances for certification of officially drawn samples.

## SCORE SHEET

- 52.535 Score sheet for canned beets.

## IDENTITY, STYLES, AND GRADES

§ 52.521 *Identity.* "Canned beets" means canned beets as defined in the definitions and standards of identity for canned vegetables (21 CFR 52.990), is-

sued pursuant to the Federal Food, Drug, and Cosmetic Act.

§ 52.522 *Styles of canned beets.* (a) "Whole" or "whole beets" means canned beets consisting of whole beets that retain the approximate original conformation of the whole beet.

(b) "Slices" or "sliced beets" means canned beets consisting of slices of beets, irrespective of whether such slices are "corrugated," "fluted," "wavy," or "scalloped."

(c) "Quarters" or "quartered beets" means canned beets consisting of quarters of beets.

(d) "Dice" or "diced beets" means canned beets consisting of diced beets.

(e) "Julienne," "French style," or "shoestring" means canned beets consisting of strips of beets.

(f) "Cut" means canned beets consisting of units, irrespective of whether such units are "segmented" or "wedge-shaped," which are not uniform in size or shape or which do not conform to any of the foregoing styles.

(g) "Unit" means an individual beet or portion of a beet in canned beets.

§ 52.523 *Grades of canned beets.* (a) "U. S. Grade A" or "U. S. Fancy" is the quality of canned beets that possess similar varietal characteristics possess a normal flavor and odor; possess a good color; are practically free from defects; are tender; and possess such uniformity of size and shape as to score not less than

<sup>1</sup> Compliance with the provisions of these standards shall not excuse failure to comply with the provisions of the Federal Food, Drug, and Cosmetic Act or with applicable State laws and regulations.



85 points when scored in accordance with the scoring system outlined in this subpart.

(b) "U. S. Grade C" or "U. S. Standard" is the quality of canned beets that possess similar varietal characteristics; possess a normal flavor and odor; possess a fairly good color; are fairly free from defects; are fairly tender; and possess such uniformity of size and shape as to score not less than 70 points when scored in accordance with the scoring system outlined in this subpart.

(c) "Substandard" is the quality of canned beets that fail to meet the requirements of U. S. Grade C or U. S. Standard.

#### FILL OF CONTAINER AND DRAINED WEIGHTS

§ 52.524 *Recommended fill of container.* The recommended fill of container is not incorporated in the grades of the finished product since fill of container, as such, is not a factor of quality for the purpose of these grades. It is recommended that each container be

filled as full as practicable with beets without impairment of quality and that the product and packing medium occupy not less than 90 percent of the total capacity of the container.

§ 52.525 *Recommended minimum drained weight.* The minimum drained weight recommendations in Table No. I of this section are not incorporated in the grades of the finished product since drained weight, as such, is not a factor of quality for the purpose of these grades. The drained weight of canned beets is determined by emptying the contents of the container upon a U. S. Standard No. 8 sieve of proper diameter so as to distribute the product evenly, inclining the sieve slightly to facilitate drainage and allowing to drain for two minutes. The drained weight is the weight of the sieve and beets less the weight of the dry sieve. A sieve 8 inches in diameter is used for the No. 2½ size can (401 x 411) and smaller sizes; and a sieve 12 inches in diameter is used for containers larger than the No. 2½ size can.

TABLE NO. I—RECOMMENDED MINIMUM DRAINED WEIGHTS, IN OUNCES, OF BEETS

Container size or designation	Whole <sup>1</sup>		Sliced <sup>1</sup>		Diced	Quartered cut	Julienne
	Size Nos. 1 to 3, inclusive	Size Nos. 4 to 6, inclusive	Small	Medium and large			
8-ounce tall.....	5½	5	5½	5	5½	5½	5½
8-ounce jar.....	5½	5	5½	5	5½	5½	5½
No. 1 picnic.....	6¾	6½	6¾	6½	7	7	6¾
No. 300.....	9½	9¼	9¾	9½	10	10	8¾
No. 303.....	10	9½	10¼	9¾	10½	10½	9
No. 303 jar.....	10	9½	10¼	9¾	10½	10½	9
No. 2.....	12½	12¼	12½	12	12¾	12½	11½
No. 2½.....	19½	19	19	18½	19	18½	18¼
No. 2½ jar.....	19¼	18¾	18¾	18¼	18¾	18¼	18
No. 10.....	69	68	69	68	72	70	68

<sup>1</sup> Mixed sizes to be based on drained weight for predominant size of individual units.

#### SIZES

§ 52.526 *Sizes of beets in whole beets.* The size of any beet is determined by measuring the smallest diameter through the center transverse to the longitudinal axis of the beet. The word and number designations of the various sizes of beets in whole beets are shown in Table No. II of this section. Such table also specifies the count range per container for stated container sizes.

TABLE NO. II—SIZES OF BEETS IN WHOLE BEETS

Word designation	Number designation	Count range per container					
		8-ounce Tall	No. 1 Picnic	No. 303 can No. 303 jar	No. 2 can	No. 2½ can No. 2½ jar	No. 10 can
Tiny-----	Size 1---	20 and over--	25 and over--	35 and over--	44 and over--	70 and over--	250 and over.
	Size 2---	14 to but not including 20.	18 to but not including 25.	25 to but not including 35.	31 to but not including 44.	50 to but not including 70.	175 to but not including 250.
	Size 3---	10 to but not including 14.	12 to but not including 18.	18 to but not including 25.	22 to but not including 31.	35 to but not including 50.	125 to but not including 175.
Small-----	Size 4---	5 to but not including 10.	8 to but not including 12.	10 to but not including 18.	13 to but not including 22.	20 to but not including 35.	75 to but not including 125.
	Size 5-----		5 to but not including 8.	7 to but not including 10.	9 to but not including 13.	15 to but not including 20.	50 to but not including 75.
Medium--	Size 6-----		Less than 5--	Less than 7--	Less than 9--	Less than 15--	Less than 50.
Assorted sizes. <sup>1</sup>							
Mixed sizes. <sup>2</sup>							

<sup>1</sup> Assorted sizes is a combination of any 2 adjacent sizes.

<sup>2</sup> Mixed sizes is a combination of more than 2 adjacent sizes.

§ 52.527 *Sizes of beet slices in sliced beets.* The size of any slice in sliced beets is determined by measuring the smallest diameter of the largest surface of the slice. The word designation of the various sizes of slices in sliced beets is shown in Table No. III of this section.

TABLE NO. III

[Sizes of slices in sliced beets]

Word designation	Smallest diameter in inches
Small-----	Less than 2 inches.
Medium-----	From 2 inches up to but not including 2½ inches.
Large-----	Not less than 2½ inches.
Assorted sizes. <sup>1</sup>	
Mixed sizes. <sup>2</sup>	

<sup>1</sup> Assorted sizes is a combination of any two adjacent sizes.

<sup>2</sup> Mixed sizes is a combination of all designated sizes.

## FACTORS OF QUALITY

§ 52.528 *Ascertaining the grade.* (a) The grade of canned beets may be ascertained by considering, in conjunction with the requirements of the respective grade, the respective ratings of the factors of color, uniformity of size and shape, absence of defects, and texture.

(b) The relative importance of each

factor which is scored is expressed numerically on the scale of 100. The maximum number of points that may be given each such factor is:

Factors:	Points
Color-----	25
Uniformity of size and shape-----	15
Absence of defects-----	30
Texture-----	30
Total score-----	100

(c) "Normal flavor and normal odor" means that the canned beets are free from objectionable flavor and objectionable odors of any kind.

§ 52.529 *Ascertaining the rating for the factors which are scored.* The essential variations within each factor which is scored are so described that the value may be ascertained for each factor and expressed numerically. The numerical range within each factor which is scored is inclusive (for example, "12 to 15 points" means 12, 13, 14, or 15 points).

§ 52.530 *Color—(a) (A) classification.* Canned beets that possess a good color may be given a score of 21 to 25 points. "Good color" means that the canned beets possess a color that is uniform, bright, and typical of canned beets produced from beets of similar varietal characteristics.



(b) *(C) classification.* If the canned beets possess a fairly good color, a score of 18 to 20 points may be given. Canned beets that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly good color" means that the canned beets possess a color that is typical of canned beets produced from beets of similar varietal characteristics and such color may be variable or slightly dull.

(c) *(SStd) classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 17 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.531 *Uniformity of size and shape*—(a) *(A) classification.* Canned beets that are practically uniform in size and shape may be given a score of 12 to 15 points. "Practically uniform in size and shape" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The size of the individual beet is not more than  $2\frac{1}{4}$  inches in diameter, measured as aforesaid; the beets may vary moderately in shape, and the diameter of the largest beet does not exceed the diameter of the smallest beet by more than 50 percent of the diameter of the smallest beet.

(2) *Quartered beets.* The beets from which the quarters have been prepared were of a size not more than  $2\frac{1}{2}$  inches in diameter, measured as aforesaid, and the weight of the largest quarter does not exceed the weight of the smallest quarter by more than 50 percent of the weight of the smallest quarter.

(3) *Sliced beets.* The individual slice is not more than  $\frac{5}{16}$  inch in thickness when measured at the thickest portion; the size of each slice is not more than  $3\frac{1}{2}$  inches in diameter, measured as aforesaid, and the diameter of the largest slice does not exceed the diameter of the smallest slice by more than 50 percent of the diameter of the smallest slice.

(4) *Diced beets.* The units are practically uniform in size and shape with edges measuring not more than  $\frac{3}{8}$  inch; and the aggregate weight of the units which are smaller than one-half of a cube and of all large and irregular units does not exceed 15 percent of the weight of all units.

(5) *Julienne, French style, or shoe-string.* The strips of beets are practically uniform in size and shape, with cross sections measuring not more than  $\frac{3}{16}$  inch, and the aggregate weight of all strips less than  $1\frac{1}{2}$  inches in length does not exceed 25 percent of the weight of all the strips.

(6) *Cut.* The individual units weigh not less than  $\frac{1}{4}$  ounce nor more than 2 ounces each and the largest unit weighs not more than four times the weight of the smallest unit. An occasional unit which is not representative of the general size of all the units is excluded in determining size variation.

(b) *(C) classification.* If the canned beets are fairly uniform in size and shape, a score of 8 to 11 points may be given. "Fairly uniform in size and shape" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The size of the individual beet is not more than  $2\frac{1}{2}$  inches in diameter, measured as aforesaid; the beets may vary considerably in shape, and the diameter of the largest beet is not more than twice the diameter of the smallest beet.

(2) *Quartered beets.* The beets from which the quarters have been cut were of a size not more than  $3\frac{1}{2}$  inches in diameter, measured as aforesaid, and the weight of the largest quarter is not more than twice the weight of the smallest quarter.

(3) *Sliced beets.* The individual slice is not more than  $\frac{3}{8}$  inch in thickness when measured at the thickest portion; the size of each slice is not more than  $3\frac{1}{2}$  inches in diameter, measured as aforesaid; and the diameter of the largest slice is not more than twice the diameter of the smallest slice.



(4) *Diced beets.* The units are fairly uniform in size and shape, with edges measuring not more than  $\frac{1}{2}$  inch; and the aggregate weight of all units which are smaller than one-half of a cube and all large and irregular units does not exceed 25 percent of the weight of all units.

(5) *Julienne, French style, or shoestring.* The strips of beets are fairly uniform in size and shape, with cross sections measuring not more than  $\frac{3}{16}$  inch and the aggregate weight of all strips less than  $1\frac{1}{2}$  inches in length does not exceed 40 percent of the weight of all the strips.

(6) *Cut.* The individual units weigh not less than  $\frac{1}{8}$  ounce nor more than 3 ounces each and the largest unit weighs not more than twelve times the weight of the smallest unit. An occasional unit which is not representative of the general size of all the units is excluded in determining size variation.

(c) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 7 points and shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule).

§ 52.532 *Absence of defects*—(a) *General.* The factor of absence of defects refers to the degree of freedom from defective units. Defective units are slabs, units damaged by mechanical injury, units blemished by brown or black internal or external discoloration, pathological injury or insect injury and units blemished by other means.

(i) "Slab" means any portion of a whole beet obtained in slicing that possesses only one cut surface or cut surfaces of unequal areas varying in diameter more than  $\frac{1}{2}$  inch.

(2) "Damaged by mechanical injury" means crushed, broken, or cracked units, units with excessively frayed edges and surfaces, units with unpeeled areas, excessively trimmed units, or damaged by other means.

(3) "Blemished" means any blemish

affecting an aggregate area greater than the area of a circle  $\frac{3}{16}$  inch in diameter or any blemish which seriously affects the appearance or eating quality of the unit.

(b) (*A*) *classification.* Canned beets that are practically free from defects may be given a score of 26 to 30 points. "Practically free from defects" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The aggregate weight of all defective units does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than one-half thereof or one beet, whichever weighs more, may consist of blemished units.

(2) *Sliced, quartered, and cut beets.* The aggregate weight of all blemished units and units damaged by mechanical injury does not exceed 15 percent of the weight of all the units, and of such 15 percent not more than one-half thereof or one slice, quarter or cut, whichever weighs more, may consist of blemished units, and with respect to sliced beets not more than 10 percent of the weight of all the units may consist of units that are slabs.

(3) *Diced, Julienne, French style, or shoestring beets.* The aggregate weight of all defective units does not exceed 10 percent of the weight of all the units, and of such 10 percent not more than one-half thereof may consist of blemished units.

(c) (*C*) *classification.* Canned beets that are fairly free from defects may be given a score of 22 to 25 points. Canned beets that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly free from defects" has the following meanings with respect to the various styles of canned beets:

(1) *Whole beets.* The aggregate weight of all defective units does not exceed 30 percent of the weight of all the units, and of such 30 percent not more than one-half may consist of blemished units.

(2) *Sliced, quartered, and cut beets.* The aggregate weight of all blemished units and units damaged by mechanical injury does not exceed 30 percent of the weight of all the units, and of such 30 percent not more than one-half thereof may consist of blemished units, and with respect to sliced beets not more than 25 percent of the weight of all the units may consist of units that are slabs.

(3) *Diced, Julienne, French style, or shoestring beets.* The aggregate weight of all defective units does not exceed 25 percent of the weight of all the units, and of such 25 percent not more than one-half thereof may consist of blemished units.

(d) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (c) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

§ 52.533 *Texture.* The factor of texture refers to the tenderness of the beets, and the degree of freedom from stringy or coarse fibers.

(a) (*A*) *classification.* Canned beets that possess a tender texture may be given a score of 26 to 30 points. "Tender texture" means that the beets are tender, not fibrous, and possess a uniform character.

(b) (*C*) *classification.* If the canned beets possess a fairly tender texture, a score of 22 to 25 points may be given. Canned beets that fall into this classification shall not be graded above U. S. Grade C or U. S. Standard, regardless of the total score for the product (this is a limiting rule). "Fairly tender texture" means that the beets are fairly tender,

may be variable in character but not tough or hard, and may possess a few stringy or coarse fibers.

(c) (*SStd*) *classification.* Canned beets that fail to meet the requirements of paragraph (b) of this section may be given a score of 0 to 21 points and shall not be graded above Substandard, regardless of the total score for the product (this is a limiting rule).

#### LOT INSPECTION AND CERTIFICATION

§ 52.534 *Ascertaining the grade of a lot.* The grade of a lot of canned beets covered by these standards is determined by the procedures set forth in the Regulations Governing Inspection and Certification of Processed Fruits and Vegetables, Processed Products Thereof, and Certain Other Processed Food Products (§§ 52.1 to 52.87).



## SCORE SHEET

§ 52.535 *Score sheet for canned beets.*

Container size.....	-----
Container code or marking.....	-----
Label.....	-----
Net weight (ounces).....	-----
Vacuum (inches).....	-----
Drained weight (ounces).....	-----
Style.....	-----
Size of whole beets (count).....	-----
Size of sliced beets (diameter).....	-----

Factors	Score points		
Color.....	25	{ (A) 21-25 (C) <sup>1</sup> 18-20 (SStd.) <sup>1</sup> 10-17	
Uniformity of size and shape.	15	{ (A) 12-15 (C) 8-11 (SStd.) <sup>1</sup> 0-7	
Absence of defects.....	30	{ (A) 26-30 (C) <sup>1</sup> 22-25 (SStd.) <sup>1</sup> 0-21	
Texture.....	30	{ (A) 26-30 (C) <sup>1</sup> 22-25 (SStd.) <sup>1</sup> 0-21	
Total score.....	100		
Normal flavor and odor.....	-----		
Grade.....	-----		

<sup>1</sup> Indicates limiting rule.

*Recodified in the Federal Register of December 9, 1953 (18 F.R. 7937).  
Amendment published in the Federal Register January 4, 1955, to become  
effective February 4, 1955.*

§52.534 amended, May 22, 1957 (22 F.R. 3547).







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